REMARKS

Claims 1-19 were pending and rejected. Claims 1, 2, 6, 11, 18 and 19 are being amended. Claims 5, 8 and 10 are being canceled. Claims 1-4, 6, 7, 9 and 11-19 remain pending. Reconsideration in view of the amendments above and remarks below is respectfully requested.

Applicant would like to thank the Examiner for the interview of February 22, 2005, at which time the undersigned and the Examiner discussed the claims and the prior art references. Agreement was reached that the claims as amended overcome the cited references. The Examiner indicated that a second Examiner will review the claims and that another search will be conducted.

The Examiner rejected claims 1-19 under 35 USC § 103 as obvious over Lumelsky in view of Coyote and further in view of Stumm.

Lumelsky discloses a method of regulating server resources. When clients request to use streaming object resources, Service Management Layer (Figure 6 of Lumelsky) maps the request to available servers based on predetermined criteria. System Management Layer (Figure 6 of Lumelsky) shapes capacity of object resources based on demands, available server resources and willingness of servers. As the Examiner agrees, Lumelsky does not teach a time based component for billing purposes. Coyote teaches that SprintPCS offers calling plans based on the time zone. Stumm discloses scheduling the downloading of predetermined information in accordance with a time schedule.

(1) Lumelsky, Coyote and Stumm do not disclose a system for time-based access to storage resources

The Examiner asserts that Stumm discloses time-based access. However, Stumm discloses time-based delivery of information, not time-based access to a storage device. None of Lumelsky, Coyote and Stumm discloses time-based access, as required by claims 1, 11, 18 and 19. Claim 1 as amended comprises "a disk system manager, operative to control accessibility to

the multiple storage devices by host systems based upon a time component and a service level agreement, the service level agreement specifying billing rates based upon time components; and a storage access service system operative to grant authorization to access said multiple storage devices and to compute invoice amounts based upon the time component and the service level agreement." Similarly, claim 11 as amended comprises "granting access to said resource based upon said identity of said user, said identity of said resource, the time of the request, and said time zone using the first table." Claim 18 as amended comprises "using the first table to enable the user to access the disk subsystem via a data communication channel only during the at least one of a plurality of permitted access times." Claim 19 as amended comprises "using the first table to enable the user to access the disk subsystem via a data communication channel only during the at least one of a plurality of permitted access times." Accordingly, for at least these reasons, Applicant submits that claims 1, 11, 18 and 19 and all other claims which depend therefrom are patentable over Lumelsky, Coyote and Stumm.

(2) Separate control communication and data communication lines.

In Lumelsky, Coyote and Stumm, control information and data communication channels are not distinguished. Claim 1 as amended comprises "a disk system... capable of being coupled to a host system via interface ports and a data communication channel" and "a disk system manager... capable of being coupled to the host system via a control communication channel that is different from the data communication channel." Claim 11 as amended comprises "granting access to said resource..., said granting including enabling the user to access the resource via a data communication channel" and "using a control communication channel to map the resource to the user." Claim 18 as amended comprises "using a control communication channel to map said resource to the user" and "using the first table to enable the user to access the disk subsystem via a data communication channel only during the at least one of a plurality of permitted access times." Claim 19 as amended comprises "using a control communication channel to map said resource to the user" and "using the first table to enable the user to access the disk subsystem via a data communication channel only during the at least one of a plurality of permitted access times."

It should be appreciated that different organizations may share a single storage resource. By dividing data and control communications, data communication between host systems and disk systems remains secure. In other words, the Storage Access Service System of an SSP is incapable of reading customer data. Intermixing two data and control communications on single line increases the possibility of hacking.

Accordingly, for at least these reasons, Applicant submits that claims 1, 11, 18 and 19 and all other claims which depend therefrom are patentable over Lumelsky, Coyote and Stumm.

In summary, since each of the independent claims contains language not described by Lumelsky, Coyote or Stumm, Applicant respectfully submits that all pending claims are patentable for at least the above reasons.

If the Examiner has any questions or needs any additional information, the Examiner is invited to contact the undersigned.

Respectfully submitted,

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